FE86

Diagram No. 8860-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey ..... Field Examination

Field No. PF-05150

Office No. FE-86

LOCALITY

State ..... Alaska

General Locality ..... Iliuliuk Bay

Locality ..... East Channel to Unalaska

1950

CHIEF OF PARTY
C. Pierce

LIBRARY & ARCHIVES

DATE ..... September 18, 1950

☆ U.S. GOV. PRINTING OFFICE: 1976—669-441

NOTE: A new system for registerin Field Examinations (FE's) was established in 1980. All FE's are now consecutivley numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as:

FE No.4 1950

FE86

FE No. 4
1950

Diag. Cht. No. 8860-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC FIELD EXAMINATION

Field No. PF-05150 Office No. F.E.#4 (1950)

LOCALITY

State Alaska

General locality Iliuliuk Bay

Locality East Channel to Unalaska

1950

CHIEF OF PARTY

Charles Pierce

LIBRARY & ARCHIVES

DATE 18 SEPTEMBER 1950

B-1870-1 (1)

FE No. 4
1950

Form 537
Ed. Dec. 1930

REG. NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. FF 05150

REGISTER NO. F.E. # 4, (1950)

State Alaska

General locality Iliuliuk Bay

Locality East Channel to Unalaska

Scale 1/5,000 Date of survey 18 August, 1950

Vessel USC & GSS PATHFINDER, Launch #1

Chief of Party CHARLES PIERCE

Surveyed by John C. Bull

Protracted by John C. Bull

Soundings penciled by John C. Bull

Soundings in fathoms feet Feet

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated Paragraph 33, Supplemental Instructions 25 April, 1950

Remarks:

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT TO ACCOMPANY FIELD EXAMINATION IN
EAST CHANNEL AT UNALASKA, VICINITY OF
DUTCH HARBOR, ALASKA

FIELD NO. PF 05150
1950 FIELD WORK

SCALE 1:5,000

USC&GSS PATHFINDER CHARLES PIERCE, COMMANDING

A - PROJECT

Project CS-327, paragraph 33, Supplemental Instructions, dated 25 April 1950, examination of East Channel at Unalaska, vicinity of Dutch Harbor, Alaska.

B- SURVEY LIMITS AND DATES

The survey covered an area approximately 100 meters square, centered at a point in latitude 53° 52' 43.3" N, longitude 166° 32' 05.0" W, between buoys FLR No. 2 and C-3 (Chart 9008, Dutch Harbor). (Limits quoted from instructions).

The examination was made on 18 August 1950.

C - VESSEL AND EQUIPMENT

The PATHFINDER's motor launch No. 1 and an 808 type fathometer were used.

D - TIDES AND CURRENT STATIONS

Tide reducers were obtained from fifteen minute staff readings on the standard tide gage staff at Dutch Harbor, Alaska.

E - SMOOTH SHEET

A smooth sheet was not made for this field examination. The boat sheet is submitted as final. The shoreline, shown in red, was pantographed from chart 9008, Dutch Harbor, and transferred to the boat sheet allowing for shift to NA 1927 Datum. Topographic signals TOW and GAB were located on the boat sheet

F - CONTROL STATIONS

Triangulation positions were obtained from lists of geographic

positions of Second and Third Order Triangulation executed in 1896, 1934, 1935, 1938 and 1941, Unalaska Harbor and Aleutian Island Passes, and Unalaska Island - Unalaska Bay & Vicinity. This control is on the NA 1927 Datum.

G - SHORELINE AND TOPOGRAPHY

Topographic signals TOW, (Coast Guard Signal Tower), and GAB, (west corner of small shack on the beach), were located directly on the boat sheet by the usual planetable methods. No shoreline or detail was located.

H - SOUNDINGS

Soundings were obtained with an 808 type fathometer, calibrated to a velocity of 820 fms/sec. Bar checks at 10, 20, 30 and 40 feet were used to determine corrections to be applied to soundings.

I - CONTROL OF HYDROGRAPHY

The usual methods for visual hydrography were used. Natural ranges were used to control the direction and spacing of lines.

J - ADEQUACY OF SURVEY

This examination is considered adequate.

K - CROSSLINES

No crosslines were run.

L - COMPARISON WITH PRIOR SURVEYS

No comparison with prior surveys has been made.

M - COMPARISON WITH CHART

A comparison with Chart 9008, dated 12-11-50 Dutch Harbor, was made. The shoalest depth, 23½ feet, is found mid-channel between buoys FLR No 2, and C-1 where chart shows ~~21~~ 24 foot. All other soundings are in agreement with charted soundings. (Black Can buoy No. ~~X~~ 7 is now Black Can buoy No. 1.)

N - Dangers and Shoals

Examination is of shoal (Tuscarora RK.) in the East channel to Unalaska. No further description is necessary.

O - COAST PILOT INFORMATION

Alaska PART II - Pg. 383, Line 25 Change to "Least depth found in 1950 was 23½ feet."
Pg. 383, Line 28 change to "It has a least depth at 23½ feet etc."

P - AIDS TO NAVIGATION

The floating aids to navigation in the immediate vicinity of this examination are:

ILIULIUK
~~Tuscarora~~ Reef, Lighted Buoy 2, Fl. R., 4 sec.
Latitude 53° 52'.71 Longitude 166° 31'.93
Depth, 28 ft., Position No. 56a, 18 August 1950

Red Nun No. 4
Latitude 53° 52'.76 Longitude 166° 32'.10
Depth, 50 ft., Position No. 55a, 18 August 1950

Black Can No. 1
Latitude 53° 52'.64 Longitude 166° 31'.96
Depth, 23 ft., Position No. 57a 18 August 1950

Red Num No. 4
Latitude 53° 52'.80 Longitude 166° 32'.09
Depth, 28ft., Position No. 3b 19 August 1950

Black Can No. 1
Latitude 53° 52'.78 Longitude 166° 32'.07
Depth, 7½ ft., Position No. 4b 19 August 1950

Red Num No. 2
Latitude 53° 52'.84 Longitude 166° 31.93
Depth 23 ft., Position No. 5b 19 August 1950

PARAGRPHAS Q, R, S, T, and U - Y do not apply

Z - TABULATION OF APPLICABLE DATA ATTACHED

1. Fathometer corrections
2. Tide reducers
3. Alphabetical list of signals used
4. Description of recoverable topographic station
5. Statistics.

28 August 1950

Submitted:

JOHN C. BULL
Lt. Commander, USC&GS

Approved and forwarded:

CHARLES PIERCE
Commander, USC&GS
Commanding Ship PATHFINDER
Chief of Party

1. FATHOMETER CORRECTIONS;

Bar check prior to survey

Fathometer reading	True depth	Correction
9.3	10.0	Plus 0.7
20.0	20.0	0.0
30.0	30.0	0.0
40.0	40.0	0.0

Bar check after survey

19.8	20.0	Plus 0.2
40.0	40.0	0.0

Correction used

True depth	1st Bar check Correction	2nd Bar check Correction	Mean	Correction used
10.0	Plus 0.7	- - -	Plus 0.7	Plus ½ ft.
20.0	0.0	Plus 0.2	Plus 0.1	0.0 ft.
30.0	0.0	- - -	0.0	0.0 ft.
40.0	0.0	0.0	0.0	0.0 ft

Phase Comparison Correction

"A" Scale	"B" Scale	Difference
48.0	46.0	Plus 2.0
48.0	46.0	" 2.0
48.0	45.0	" 3.0
45.5	43.0	" 2.5
	Mean correction	Plus 2.4

2. TIDE REDUCERS

Dutch Harbor - Standard Tide Gage

18 August 1950 Staff Readings		Reducers
1315	5.3	-2 ft. to 1454
1330	5.2	-2½ ft. to 1609
1400	5.3	
1430	5.4	
1500	5.5	
1530	5.7	
1600	5.9	
1630	6.2	

19 August 1950 Staff Readings		Reducers
0930	6.4	-3 ft. 0930 to 1130
1000	6.35	
1030	6.30	
1100	6.2	

MLLW on Staff = 3.247'

3. ALPHABETICAL LIST OF SIGNALS

AS - (Unalaska Astronomical Station 1896 - 1938)

GAB - (Northwest corner of small shack on beach)

LOW - (Unalaska Church, Lower Cross, 1896)

RIGHT - (North Radio Tower, 1934)

TOW - (Coast Guard Signal Tower)

FE-4, 1950 8

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 524
Rev. Jan. 1944

DESCRIPTION OF RECOVERABLE TOPOGRAPHIC STATION

Name TOW

Year 1950

General locality ILIULIUK BAY, ALASKA

Sheet No. *

Locality UNALASKA

Datum NA 1927

Chief of party C. Pierce

Scaled by J.C.B.

Checked by OHQ

	°	′	Meters
Lat.	53	52	1297
Long.	166	32	211

Approximate elevation above high-water mark feet

Location method: Planetable, ~~Sextant, Theodolite, Airphotographic plot~~

Detailed description:

Signal is the center of the Coast Guard signal tower at Unalaska

Sketch for shoreline and air photograph reference distances and reference points:

Not required

*Located on Boat Sheet PF 05150, 18 August 1950

SHORELINE REFERENCE DISTANCES

Object	Distance in meters	Direction 00° 00′	Azimuth

REFERENCE POINTS IDENTIFIABLE ON AIR PHOTOGRAPHS

Object	Distance in meters	Direction 00° 00′	Azimuth

Distances must be horizontal distances actually measured on the ground—not scaled.

Above distances measured by:

REFERENCES: Topographic Manual, paragraphs 16e, 29, 30, 57, and page 52; Hydrographic Manual, 2351.

6464

16—21062-3 GPO

5. STATISTICS

DATE 1950	DAY LETTER	LAUNCH NO.	NUMBER OF POSITIONS	HYDROGRAPHIC STAT. MILES	TOTAL NAUT. MILES
18 Aug.	a	1	58	2.7	6.1
19 Aug.	b	1	8		4.8

5558
641-50

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 27 September 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
1 volumes of sounding records for

~~HYDROGRAPHIC SHEET~~ FE No. 4 1950

Locality Iliuliuk Bay, Alaska

Chief of Party: C. Pierce in 1950
Plane of reference is mean lower low water, reading
3.3 ft. on tide staff at Dutch Harbor
15.4 ft. below B. M. 2 (1934)

Height of
Mean high water above plane of reference is 3.4 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 756675

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E. #4, (1950)

Records accompanying survey:

Boat sheets 1; sounding vols. 1; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 1 envel.

special reports, etc. No Smooth Sheet .....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		66
Number of positions checked		15
Number of positions revised		2
Number of soundings revised (refers to depth only)		—
Number of soundings erroneously spaced		6
Number of signals erroneously plotted or transferred		0
Topographic details	Time	0
Junctions	Time	0
Verification of soundings from graphic record	Time	1

Verification by J. R. Engle Total time 16 hrs Date 5-25-51

Reviewed by [signature] Time 8 Date 6-12-51

M-2232-1

REVIEW OF FIELD EXAMINATION NO. 4, 1950

This is a field examination of the entrance to East Channel at Unalaska, in the vicinity of Dutch Harbor, Alaska. The examination covers an area approximately 100 meters by 300 meters centered at a point in lat. 53° 52' 42" N, long. 166° 31' 57" W, between buoys FLR No. 2 and C-1.

The purpose of this field examination was to confirm the depth and width of the entrance to East Channel reported by the U. S. Corps of Engineers, Alaska District, as having a project depth of 25 ft. and a width of 350 ft. as of January 1, 1941. This Bureau was unable to obtain copies of the Engineers surveys or other data furnishing this information.

The shoreline, which is shown in red, was transferred to the smooth sheet from Chart 9008. The source of the control is adequately described in the Descriptive Report.

The field examination shows a controlling depth of 23½ ft. in lat. 53° 52.67', long. 166° 31.94'. The width of the entrance to East Channel conforms with the project dimension.

A comparison between FE-1, 1942, and the present field examination shows good agreement in depth except for minor differences of 1-2 ft. The present depth of 23½ ft. in lat. 53° 52.67', long. 166° 32.94', falls in depths of 23 ft. to 25 ft. on the prior field examination.

FE-4, 1950, was applied to Chart 9008 dated December 11, 1950, before verification. A comparison with the chart shows no revisions in the charted soundings are necessary.

The survey positions of the following buoys are in disagreement with the charted positions but probably reflect a temporary condition:

Buoys	Chart Location (Unalaska Datum) Lat.	Long.	F.E. Location (Referred to chart location)
N-4	53° 52.87'	166° 32.22'	40 m. southwest
N-4	53° 52.80'	166° 32.20'	20 m. northwest
C-1	53° 52.85'	166° 32.21'	20 m. southeast

I. M. Zeskind

June 13, 1951
Approved by: R. H. Carstens

32'-30"

166°-32'-00"

31'-30"

166°-31'-00"

53'-30"

53'-30"

F.E. No. 4, 1950

ALASKA

ILIULIUK BAY

EAST CHANNEL TO UNALASKA

Scale 1: 5,000

N. A. 1927 DATUM

RIGHT △(NORTH RADIO TOWER, 1934)

△ SOUTH RADIO TOWER, 1934

△ DOCK, 1941

53°-53'-00"

53°-53'-00"

N2

N4

C1

ILIULIUK REEF

N4

TOW ⊙
COAST GUARD
SIGNAL TOWER
(landmark)

FI R 2

C1

least depth 23½ ft.

(RUSSIAN CHURCH, 1938) HI
(UNALASKA CHURCH, LOWER CROSS, 1896) △ LOW

UNALASKA ASTRONOMICAL STATION, 1896-1938 △

UNALASKA

52'-30"

52'-30"

GRAVE, 1896-1941 △

GAB ⊙
(NW corner shack)

FE No. 4
1950

NAUTICAL CHARTS BRANCH

SURVEY NO. F.E. #4, (1950)

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/6/50	9008	Rich	Before ~~After~~ Verification and Review
			Completely applied before V&R
			Before After Verification and Review
5-28-52	9008	Geo M Progoja	Completely applied after V&R
			Before After Verification and Review
"	9007	"	~~Before~~ After Verification and Review
3 Feb. 60	9006	H.E. MacEwen	[redacted] After Verification and Review in full. 3 MM
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.